

लोक सेवा आयोग
नेपाल नागरिक उड्डयन प्राधिकरण, प्राविधिक, इ. एण्ड टे.कम इन्जिनियरिङ्ग, पाँचौं, वरिष्ठ सहायक
पदको खुला प्रतियोगितात्मक लिखित परीक्षा
२०७८।०८।२७

पत्र : द्वितीय
समय : २ घण्टा ३० मिनेट

पूर्णाङ्क : १००

विषय: सेवा सम्बन्धी

प्रत्येक Section को उत्तर छुट्टाछुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ । अन्यथा उत्तरपुस्तिका रद्द हुनेछ ।

Section "A"

50 Marks

1. List out the ideal characteristics of an OPAMP. Also define CMRR and Slew Rate in an OPAMP. 3+2=5
2. Write down the differences between BJT and FET. 5
3. What is multiplexer? Explain its uses. 5
4. Write truth table and circuit diagram of full adder and describe it. 5
5. What are Near-field and Far-field regions of an Antenna? 5
6. Describe transmission media and their types. 5
7. What are the differences between Latch and Flip flop? 5
8. What is Analog modulation? State various types of analog modulation? 5
9. What is biasing? Why is it needed? Describe different types of biasing method. 10

Section "B"

50 Marks

10. Explain the advantages and disadvantages of video compression. 5
11. What is a Surge Protector and what does it do? 5
12. Write down the working principle of RLC bridges along with its application as a Test Instrument. 5
13. What is Firewall? Explain its uses. 5
14. Define LED and describe the joining techniques of optical fiber. 5
15. Write down the basic working principle of fiber optics. What are the advantages of optical communication system? 2+3=5
16. Differentiate between lossy and lossless compression. List out some advantages of digital video over analog video. 5
17. Specify the different steps to be implemented for the conversion of Analog to Digital communication. Also specify the benefits of digital communication over analog communication. 2+3=5
18. Write down the working principle of LASER and LED. Also point out any five differences between LASER and LED. 5+5=10

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